**Indoor Air Pollution and its Health Impact on People of Malikarjun Village Development Community, Darchula district (A case study)**

Joshi HD, Pandeya R, Dhakal B, Joshi SD

Date: 2008

**Background**

Indoor air pollution in Nepal is causing deleterious effects for its people, living in the rural households, who have to depend on the low quality of energies. Kitchen pollution, in these households, is so high that the frequencies of respiratory diseases are prevalent. With this condition, it is no surprise that, Acute Respiratory Infection (ARI), in Nepal, is the second leading morbidity in 2006/2007. This study is intended to link the kitchen characteristics and exposure duration of locals (especially children and their mother) with the disease prevalence.

**Methods**

The study was carried out in Malikarjun VDC of Darchula district. Sample size for household and respondent was taken to be 62 and 225 respectively. Two stage sampling was adopted for selection of household and purposive sampling method for selection of respondents. This study was a field-oriented program supported by medical checkup, measurement of kitchen characteristics and household survey, measurement of respiratory functions, episode identification of Acute Respiratory Infection in children below two years of age, informal discussion and key informant interview.

**Results**

The result confirmed that exposure duration, smoking habit and indoor environment of the households are causing different types of diseases in the VDC including respiratory disorders in the adults and prevalence of Acute Respiratory Infection in the children up to two years of age. Further, it was found that the use of clean energy was minimal in the households and all kitchens were characterized by the presence of smoke because of the use of low quality energy sources including fuel wood and lack of proper ventilation system. In addition, the area of the kitchen and doors in them were not up to the recommended level.

**Conclusions**

The study was able to determine that the prevalence of diseases in the households was the result of indoor air pollution initiated by the use of low quality energy and poor kitchen characteristics. Therefore, promoting the efficient energy systems in the households as well as remanufacturing of the kitchen and the building with proper ventilation is needed.

**Keywords:** acute respiratory infection; children; clean energy; exposure duration; indoor air pollution; kitchen pollution.